

drinking water quality report

Department of Public Utilities, Los Alamos County, NM

Excellent Drinking Water

The Department of Public Utilities for Los Alamos County is once again proud to present our annual drinking water quality report. We are pleased to report that our drinking water is excellent. In 2003 our water met or in most cases was better than all state and federal drinking water standards.



SCADA Systems Coordinator, Mike Walters works on a pump station Motor Control Center.

Included in this report you will find information regarding the source of our drinking water, the results of water quality tests in 2003, assessments performed on the vulnerability of our water systems and water sources, and activities that we are implementing to improve our water distribution system.

We are dedicated to producing and delivering to your tap safe and afford-

able drinking water. Feel free to contact us with your comments or drinking water questions at (505) 662-8130.

The Source Of Our Drinking Water

The Los Alamos County drinking water system is supplied by groundwater pumped from 12 wells, which tap the main aquifer under the Pajarito Plateau, part of the Santa Fe Formation. The Los Alamos County system has wellhead protection in place and treats the water with a disinfectant. Sources for communities' drinking water (both tap and bottled water) can include rivers, lakes, streams, ponds, reservoirs, springs, and wells. As water travels over the surface of the land or through the ground, it dissolves naturally occurring minerals and radioactive material and can pick up substances resulting from the presence of animals or from human activity.

In late December 2003 the State of New Mexico Environment Department performed a "Source Water Assessment" of water supply wells in Los Alamos for possible sources of contamination. The Assessment is still under review and will be made available in our 2004 drinking water quality report, once the review has been completed.

The Utilities Board Invites You . . .

The Los Alamos County Utilities Board encourages public interest and participation in decisions affecting drinking water. Regular Board meetings are held on the third Wednesday of each month at 5:30 p.m. in the downstairs conference room of the County's Annex Building, located at 901 Trinity Drive. The public is always welcome.

For People With Special Conditions

Some people may be more vulnerable to contaminants in drinking water than is the general population. Immuno-compromised persons such as persons with cancer undergoing chemotherapy, persons who have undergone organ transplants, people with HIV/AIDS or other immune system disorders, some elderly, and infants can be particularly at risk from infections. These people should seek advice about drinking water from their health care providers. The EPA/CDC (Center for Disease Control and Prevention) guidelines on appropriate means to lessen infection risk by *Cryptosporidium* and other microbial contaminants are available from the Safe Drinking Water Hotline: (800-426-4791).

EPA and AWWA Hotline Numbers

Drinking water, including bottled water, may reasonably be expected to contain small amounts of some contaminants. The presence of contaminants does not necessarily indicate that water poses a health risk. Information about contaminants and potential health effects can be obtained by calling the Environmental Protection Agency's (EPA) Safe Drinking Water Hotline: (800-426-4791) or visiting them on the internet at <http://www.epa.gov/safewater/>.

Consumer Confidence Report: 2003 Drinking Water Quality Data

Detected Compounds	Units	SDWA MCL	SDWA MCLG	Range of Values Detected	System Average	Violation	Major Sources
Inorganic Compounds							
Arsenic	ppb	50	n/a	1.1 - 7.6 ¹	3.4 ¹	NO	Natural deposits
Chromium	ppb	100	100	2.9 - 4.5 ¹	3.9 ¹	NO	Natural deposits
Fluoride	ppm	4	4	0.019 - 1.3	0.41	NO	Natural deposits, fluoridation by County
Nitrate & Nitrite	ppm	10	10	0.30 - 0.41	0.36	NO	Leaching septic tanks, sewage; natural deposits
Lead (residential taps)	ppb	15 ²	0	< 5.0 - 12.0	over 90% < detect limit of 5 ppb	NO	Corrosion of household plumbing
Copper (residential taps)	ppm	1.3 ²	1.3	< 0.50 - 0.12	over 90% < detect limit of 0.09 ppm	NO	Corrosion of household plumbing
Hardness (as CaCO ₃)	grains/gal	-	-	1.66 - 5.02	2.96	NO	Natural deposits
Organic Compounds							
Total Trihalomethanes (TTHMs) ³	ppb	100	0	< 0.1 - 34.0	9.50	NO	By-product of drinking water chlorination
Radionuclides							
Alpha emitters	pCi/L	15	0	0.00 - 1.2 ¹	0.6 ¹	NO	Decay of natural deposits
Beta/photon emitters	pCi/L	50	0	2.2 - 4.3 ¹	2.8 ¹	NO	Decay of natural, man-made deposits
Microbiology							
Total Coliform ⁴	cfu per 100 mL	5%	0	Monthly Samples max. positive: 0 of 53 (0%) min. positive: 0 of 46 (0%)	Total positive samples in 2003: 0 of 572	NO	Regrowth of soil bacteria in the distribution system piping

Notes:

¹No sample for this compound was collected in 2003. Data presented in this table are from 2002 samples.

²The Action Level (AL) for lead/copper is exceeded if 90% of homes tested have lead levels above 15 ppb & copper levels above 1.3 ppm. Samples are collected every 3 years. No lead/copper samples in 2002 exceeded the AL.

³TTHM compliance is based on a running annual average. TTHM concentrations vary seasonally in our water.

⁴The MCL for total coliforms is the presence of coliform bacteria in 5% or more of the monthly samples.

Key to Table

MCL = Maximum Contaminant Level

MCLG = Maximum Contaminant Level Goal

pCi/L= picocuries per liter (a measure of radioactivity)

ppm = parts per million, or milligrams per liter

ppb = parts per billion, or micrograms per liter

cfu = colony forming units

How to Read the Table -- Our water is tested to assure that it is safe. The results of tests performed in 2003, presented in the above table, show that our water is of excellent quality. The following is an explanation of the columns:

- **SDWA MCLG** is the Maximum Contaminant Level Goal (MCLG). This is the level of a contaminant in drinking water below which there is no known or expected risk to health. MCLG allows for a margin of safety.
- **SDWA MCL** is the Maximum Contaminant Level (MCL). This is the highest level of a contaminant allowed in drinking water. MCLs are set as close to the MCLGs as feasible using the best available treatment technology.
- **Range of Values Detected** shows the minimum to maximum results observed in our water in 2003.
- **Major Sources** provides an explanation of typical or man-made origins of contaminant.

Special Water Quality Monitoring

The U.S. Environmental Protection Agency (EPA) under the Unregulated Contaminant Monitoring Regulation (UCMR) collected samples of the Los Alamos County Water System for contaminants that are currently not listed as regulated contaminants but could be listed at some future date, should the EPA feel the need to regulate a contaminant to protect the public health. All sample results were below the reporting limit (none detected).

Perchlorate

Ammonium perchlorate is the main ingredient in solid propellant for rockets, missiles, and fireworks and is used in various products such as air bag inflators, dyes, and paints. Health effects observed from perchlorate are disruption of thyroid hormone production, with pregnant women and their developing fetuses most at risk. Investigations by the EPA into the health effects of perchlorate in drinking water are on-going. While no maximum contaminant level has been proposed or adopted as of yet, states such as California and Texas have adopted Action Levels of 4.0 ppb.

Los Alamos County began monitoring for perchlorate in 1997. Using the EPA approved method for testing perchlorate, detections have only been identified in well Otowi-1 with concentrations ranging from 2.0 ppb to 4.0 ppb. This well is primarily utilized for non-potable uses.

In 2003, Los Alamos National Laboratory, Department of Energy and New Mexico Environment Department used an experimental low-level technique for testing perchlorate. This test detected trace amounts of perchlorate in various Northern New Mexico water sources, including several wells and springs in Los Alamos. Reported concentrations in Los Alamos were in the subparts per billion range. This technique for testing perchlorate is still being validated and has not been approved by the EPA.

Cryptosporidium

Cryptosporidium, found in rivers and streams, is a microscopic organism that, when ingested, can result in diarrhea, fever, and other gastrointestinal symptoms. Los Alamos water comes from wells, not rivers, and, as expected, cryptosporidium has not been detected in our water supply.

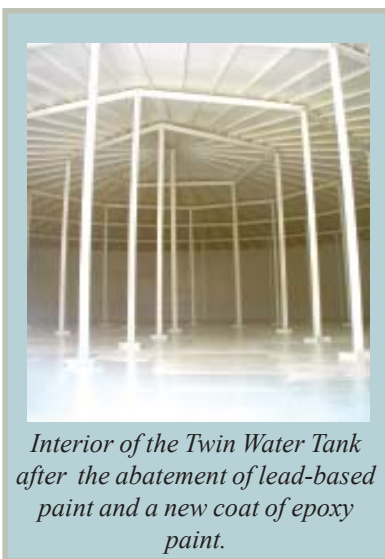
Radon

Radon is a naturally-occurring radioactive element whose decay products have been linked to cancer in humans. EPA is currently considering regulation of radon in drinking water, but no MCL has been established. Radon 222 in Los Alamos water supply wells in 2000 showed a level of 235 to 685 pCi/L, with an average of 408 pCi/L.

2003 Activities

Repainting of Twin Water Tank

One of the two 7.75 million gallon water tanks at the west end of Trinity Dr. was repainted during 2003. The original

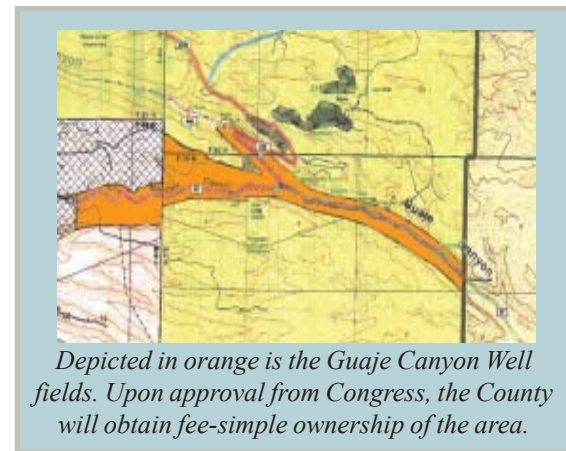


lead-based paint on the interior of the tank was removed and a new coat of epoxy paint applied. Repairs were made to the deteriorated floor as well as other general refurbishment before the tank was returned to service. With completion of the new Arizona tank, the need for the second of the "Twin" tanks went away. To avoid

costly expenses associated with keeping the tank in service (de-leading, refurbishing and repainting) the tank was dismantled and removed.

Vulnerability Assessment

As required by the Water Security Act of 2002, Los Alamos County completed an assessment of vulnerability on the water system during 2003. This assessment utilized the Risk Assessment Model – Water (RAM-W) developed by Sandia National Laboratory and approved by the EPA. Immediate measures to address identified vulnerabilities and to enhance general system security have been taken now and other, more long-term projects are being budgeted for completion in the near future.



San Ildefonso Land Negotiations

The U.S. Government has reached an agreement to sell to San Ildefonso Pueblo lands north and east of Los Alamos County as part of the Pueblo's long-standing land claim against the Government. Since this area includes Guaje Canyon where Los Alamos County owns and operates several wells, the County became party in the negotiations. Final settlement, still to be approved by Congress, provides for fee-simple County ownership of the lands in the Canyon containing the wells and associated infrastructure. During negotiations, the County also secured the right to purchase from the U.S. Forest Service additional lands adjacent to the townsite that contain present and planned utilities infrastructure. Ownership will give the County flexibility in operation, improvement and replacement of its water infrastructure as well as providing for significant future cost savings.



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*As mandated by the Safe Drinking Water Act (SDWA),
this Consumer Confidence Report details our water sources, the results of our water tests, and other information.*

*Este informe contiene información muy importante sobre su agua potable.
Tradúzcalo o hable con alguien que lo entienda bien.*

Cerro Grande Fire

The Cerro Grande fire of May 2000 devastated much of Los Alamos County's infrastructure. Under the authority of the Cerro Grande Fire Assistance Act the County received compensation funding for damages resulting from the fire and for projects to mitigate against future damages. The following are Cerro Grande funded water distribution projects in 2003.

New Arizona Tank Complete

One of Los Alamos County's highest priority mitigation measures in the wake of the Cerro Grande fire was to replace the 0.5 million gallon Group 12 water tank with a 7.75 million gallon water tank above Arizona Ave. Constructed in two phases, the initial earthwork phase was performed during the fall of 2002. Actual construction of the tank, associated piping and final earthwork was completed in 2003 - in time to put the tank in service the first week of May, before the spring fire season began.

Burned Area Water Lines

As part of the general renovation of infrastructure in the burned area, the old lead-jointed, cast iron water mains are also being replaced. While the pipes themselves are still



The new 7.75 million gallon water tank above Arizona Ave.



As part of the Burned Area Reconstruction Project, 8.6 miles of water lines are being replaced.

Recovery Activities

considered to be in good shape, the joints between each section of pipe are sealed with molten lead babbitt, poured into molds during construction. These types of joints easily leak if disturbed, and the ground vibrating activities required to reconstruct damaged roads are expected to result in numerous water leaks. Therefore, beginning in August 2003 as part of the Burned Area Reconstruction (BAR) project, approximately 8.6 miles of these mains are being replaced. The project will be completed in 2005.

North Rd Water Line & Zone Tie-ins

As part of the County's North Rd project, the Utilities Department installed two new pressure regulating stations and a 10-inch water line to connect Quemazon Community with two other zones in the water system. This new line and accompanying tie-ins have added tremendous flexibility and security to the water system. With the improvements, Quemazon water tank can now serve as additional back-up supply to both the Western Area and North Community. A second, emergency back-up pump station can now supply Quemazon, and the 7.75 million gallon Arizona Tank can now act as a reserve to the undersized 0.5 million gallon Western Area tank.